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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/737,596	12/18/2000	Neil McLoughlin	LIT V-884-DIV	1690

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BELL, BOYD & LLOYD LLC
P. O. BOX 1135
CHICAGO, IL 60690-1135

EXAMINER	
EASTHOM, KARL D	
ART UNIT	PAPER NUMBER
2832	

DATE MAILED: 09/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/737,596	MCLOUGHLIN, NEIL	
	Examiner	Art Unit	
	Karl D Easthom	2832	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 July 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *36 and 38-51* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *36 and 38-51* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 36 and 38-51 rejected under 35 U.S.C. 103(a) as being unpatentable over Chan '443, or Ravindranathan, in view of Ueda et al. (3-225802) and further in view of admitted prior art at pages 1-2 of applicant's specification. The claimed invention is disclosed as noted below, except the interior body not being contacted. Ueda discloses terminating a thermistor without contacting the interior body. Chan discloses that terminations made by total immersion cause creepage at col. 1, and applicant also admits creepage is a known problem at pages 1-2. Ueda discloses dipping thermistors ends only to accurately control resistance, such that any chip requiring such a termination such as varistor would have been obvious in order to eliminate creepage and to accurately control resistance. Chan also teaches that his method is useful for all manner of electrical components at col. 3, lines 30-41, further suggesting the propriety of employing methods of terminating different types in the same manner.

3. Chan '443 discloses the silver and nickel of claim 39 with zinc oxide varistors (by way of Utsumi et al. incorporation[1]) at col. 1, a nickel cap at about 1um and a tin cap at col. 9, , meeting claims 40 and 45. For claim 46, the layers are ceramic. For claim 47, the ends are covered as seen at Utsumi Fig. 1, for example, or Chan at col. 1 describes same. For claims 36 and 48, as to Cobb, contacting the ends directly (without silver) is obvious in view of JP 9-260106 or 3-225802 in order to save the cost of silver. Further, applicant admits of the

structure as noted above. Ravindranathan disclose similar teachings at col. 1 with a typical prior art semiconductor body with conductive plates interleaved at Fig. 1, with typical tin and nickel platings, and it would have been obvious in view of the noted teachings to employ the silver underneath with tin and nickel for the purposes noted, and thicknesses thereof, where same is standard in the art as noted above. Claim 41 limitations are disclosed at the end of col. 2

4. Claims 36, 42, 44, 48 and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over admitted prior art (APA Fig. 1 and text at pages 1-2) in view of Ueda et al. (3-225802). The claimed invention is disclosed at APA Fig. 1 except that the barrier caps have been formed on the interior region according to the admitted prior art. It is admitted that this is a problem in that leaching or creepage occurs when there is total immersion. Ueda discloses immersing only the ends of the body in a terminating bath for any chip type resistor requiring terminations in order to control resistance accurately and to overcome creeping, so that such an operation would have been obvious given the admitted known problems of creepage.

5. Applicant's arguments filed 7/7/03 have been considered but are not persuasive. Applicant argues that Ueda does not disclose terminations without contacting the interior body because dipping up to the notches is disclosed. This is not correct because the notches still leave an interior region not contacted. Proper motivation has been supplied. First, it is noted that the prior art (Chan) has recognized the problem of creeping and applicant admits the problem is known. Second, Ueda discloses a method of dipping ends by employing notches to avoid another creepage problem – one whereby the resistance of the device such as a thermistors having a chip shape just like that of the varistors of Chan and Ravindrathan is accurately

[1] Utsumi '041 of record discloses conductive plates interleaved with zinc oxide layers at col. 1. Table 2 thereat

controlled by employing the dipping method and notches. No principal of operation is destroyed in Ravindrathan because the device will operate as a varistor without the silver and without the insulative covering. Similar remarks apply to Chan, because the varistor still operates with an end termination as suggested by Ueda. Applicant argues that the leaching problem is not admitted as a prior art problem. The examiner is only pointing out applicant's discussion on page2, first full paragraph, where the prior art Fig. 1 has a portion of the plating that must be removed. It is that unwanted removed portion that the Examiner refers to as the leaching or creepage portion that causes the problems of shorting.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl D Easthom whose telephone number is 703 308-3306. The examiner can normally be reached on M-Th from 5:30 to 4:00.

discloses the composition of claim 41.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin Enad, can be reached on (703) 308-7619. The fax phone number for the organization where this application or proceeding is assigned is 703 308-7722.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308-0956.

KARL D. EASTHOM
PRIMARY EXAMINER